Absence de conflit d’intérêt
Optimizing the care of older patients hospitalized through and as soon as the emergency department

Journées d’Automne September 28, 2018
De Brauwer Isabelle
Background
• Older people remain the major consumers of hospital-based acute care services, including frail older people
  - Limited functional reserves
  - Multiple coexisting chronic and progressive diseases
  - Interaction between physical, psychological and social factors

• Their main way of admission is through the Emergency Dept. (ED)
Emergency Departments’ concerns

- The number of visits to Emergency Departments (EDs) has increased over recent years
  - Overcrowding and adverse outcomes

- Older people are the fastest growing group attending EDs, especially the oldest old group
  - (un) appropriate visits?
Main way of admission: the emergency department

Qualitative and quantitative concerns: the emergency dept. (ED) constrains and the geriatric complexity

- Rapid management of an acute illness
- Unforeseeable nature and 24/7 availability
- Overcrowding
- Multiple comorbidities and complex care needs (ψsocial)
- Atypical presentations
- Longer LOS in ED
- Fragmentation of care
Adverse outcomes after discharge

- Discharged older patients to community
  - 1 patient in 2 readmitted to ED at 6 months
  - 1 patient in 3 with functional decline (FD) at 3 months
  - 1 patient in 10 : death
  - Risk for hospitalization : x3

- Hospitalized older patients
  - Early FD (48h)
  - 1 patient in 3 with persistent FD at 3 months
    - ↑mortality,
    - ↑LOS, ↑% unplanned readmissions,
    - ↑institutionalization, ↑use health care resources
Complex interventions for OP in ED: more than 10-year research

• CGA followed by appropriate interventions, may improve outcomes in ED
  - Identify a mean of two new G problems compared with usual clinical evaluation
  - Time-consuming: CGA cannot be applied routinely in ED

• Possible solution: case-finding for frailty
  - Screening for those who are likely to benefit most = frail : avoiding wasting time and to be resource-saving

Hastings et al. Acad Emerg Med October 2005
Fealy et al. Journal of Advanced nursing, 2009
Complex interventions for OP in ED: more than 10-year research

• Existing (few) trials mainly focused on service-related outcomes vs. patient-related outcomes
  - Education and training during graduation: frailty management as routine practice
  - Liaison-type service: limited evidence for efficacy
  - Frailty units: geographical concerns

• Lack of efficient screening tool: who must benefit from in-hospital CGA (geriatrics ward)?

• Few addressing the care of older people inside the ED itself: how to care for older people inside the ED?
Complex interventions for OP in ED: more than 10-year research

• Lack of efficient screening tool
  1. Hospital landscape changes: *How have specific characteristic of OP admitted from the ED evolved over a decade?*
  2. Case-finding: *Is it possible to improve the predictive abilities of a screening tool?*

• How to care for older people inside the ED itself?
  3. Actual situation: *What collaborations between GD and ED in the emergency ward in Belgium?*
  4. Fine-tuning: *how are managed OP admitted in ED? What factors influence the quality of care in this population?*
Screening for frail older people in the emergency department
Screening for frail older people in the emergency department

• Frail patients: who are they?
  – No validated definition of frailty at admission to hospital
  – Risk for functional decline = loss independency in bADL
    • 1 patient in 3 with FD at 3 months after acute hospitalization
    • Frailty-related adverse outcome => QOL, mortality
    • Public health implications (services use & costs)

• Many screening tools developed in the late nineties
  – Demographic and healthcare reforms, in particular for hospitals

• Disappointing predictive accuracy and few standardization (aim, setting, participants, resources)

Saint Hubert et al. JNHA, 2010
Screening for frail older people in the emergency department

- How to improve screening tools?
  - Added value of including different factors associated to FD
    - Biological parameters
    - Physiologic parameters: difficult to assess in acute conditions
    - Comorbidity, …

- Which one? SHERPA
  - Better identification of decliners vs. non decliners
  - Explore important G concerns: cognition, falls, functionality, self-rated health (SRH)

De Saint Hubert et al. JNHA, 2010
<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Yes</th>
<th>No</th>
<th>Points</th>
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<tbody>
<tr>
<td>History of falls in the previous year</td>
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<td></td>
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<tr>
<td>MMSE &lt; 15/21</td>
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<tr>
<td>Self-perceived in poor health</td>
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<td>Age</td>
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<tr>
<td>Premorbid IADL</td>
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<td>1</td>
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<tr>
<td>SCORE</td>
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</table>

0-3 = LOW RISK; 3,5-4,5 = MILD RISK; 5-6 = MODERATE RISK; > 6 = HIGH RISK

Can we predict functional decline in hospitalized older people admitted through the emergency department? Reanalysis of a predictive tool ten years after its conception

- **Methods:**
  - Prospective cohort study (≥75y n=305; mean age 82.5±4.9, 55% women) admitted for ≥ 48h in non-G wards
  - Outcomes: 3-month functional decline (FD)
  - Analysis: logistic regression assessment
    - Goodness-of-fit
    - Calibration
    - Discrimination decliners vs. non decliners
    - Reclassification

De Brauwer & al. BMC Geriatrics 2017
Changes in the clinical features of older patients admitted from the emergency department

- **Changed case mix** in ten years (2 prospective cohorts (≥75y): 1999, n=253 and 2009, n=355).

- Older with a **higher proportion of oldest old** (≥85y)

- More “**complex**” medical and functional characteristics in 2009

Can we predict functional decline in hospitalized older people admitted through the emergency department? Reanalysis of an predictive tool ten years after its conception

### Results:

- Lower discrimination of logistic model in 2009 vs. 1999

<table>
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<tr>
<th>Logistic regression analysis for FD</th>
<th>OR 1999 [95% CI]</th>
<th>OR 2009 [95% CI]</th>
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<tbody>
<tr>
<td>History of falls in the previous year</td>
<td>1.86 [1.23–2.81]</td>
<td>1.67 [0.995–2.81]</td>
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<td>Premorbid IADL score</td>
<td>0.80 [0.71–0.90]</td>
<td>0.85 [0.74–0.985]</td>
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<td>MMSE &lt;15/21</td>
<td>2.03 [1.20–3.41]</td>
<td>1.23 [0.85–1.80]*</td>
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<td>Self-perceived in poor health</td>
<td>1.67 [0.99–2.78]</td>
<td>1.17 [0.80–1.72]</td>
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<tr>
<td>Age</td>
<td>1.28 [1.05–1.56]</td>
<td>1.01 [0.96–1.07]</td>
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**Model performance**

- c-statistic=0.73
- Goodness-of-fit p=0.91
- c-statistic=0.64
- Goodness-of-fit p=0.58

OR = odds ratio; 95% CI = 95% confidence interval

- No improvement by demographic, comorbidity or laboratory data available upon admission
Can we predict functional decline in hospitalized older people admitted through the emergency department? Reanalysis of an predictive tool ten years after its conception

• Main conclusions:
  - ↓ predictive ability => changed case mix (1999-2009)**
  - Predictive factors: common G preoccupation/flags
  - No improvement of discrimination ability

• Strength: classical measures of performance and more recent way to assess discrimination improvement

• Limit: single center, non G-wards

**De Brauwer et al. Archives of Gerontology and Geriatrics 2014
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Care of the older people in the emergency department
Geriatric support in the emergency department: a national survey in Belgium

• **Methods**
  – An electronic cross-sectional survey in all Belgian hospitals with an ED (n=100)
  – Care aspects, collaboration, education and infrastructure; general info

• **Results (1/3)**
  – 49 GD heads (Flanders 29, Brussels 6, Wallonia 14; 5 university hospitals)
  – 12 ED heads

Devriendt & De Brauwer. BMC Geriatrics 2017
Contributed equally
Geriatric support in the emergency department: a national survey in Belgium

• **Results (2/3):** $2.9 \pm 1.6$ geriatricians; 47 IGCT

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<td>Bedside, after phone call</td>
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GER = Geriatrician, IGCT = Inpatient Geriatric Consultation Team

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• Results (3/3)
  − **Screening for frailty**: 6/10 (*during the day*)
    • Who? ED nurse (8/10)
    • Why? Context of further treatment (3/4) => 1/4 not used!
      * To support ED a G admission request (1/2)
      * Decision to call for IGCT (2/3), geriatrician (1/3)

  − **ED infrastructure for OP**: insufficient by 69%

Devriendt & De Brauwer. BMC Geriatrics 2017

*Contributed equally*
Geriatric support in the emergency department: a national survey in Belgium

- Main conclusions: emerging, but limited collaboration GD-ED in Belgium

- Strength: highlight some key aspects on the current collaboration

- Limit: lack of ED views
Discussion
Main results & discussion

- Change in case mix
  - Hospital must adapt to these rapid changes

- Functional decline (hospital) less easily predictable by clinimetric tools
  - Red flags and clinical judgement

- Limited collaboration between Geriatrics and ED
  - How can these collaborations be improved?

- ED organization is unsuited OP needs
  - Organizational concerns: “flow culture”
  - OP do not fit ED: unwelcome patients
Implications for practice

- Importance of flow to address the issue of crowding
  - To reconcile care quality and efficiency is an issue of the entire general hospital
  - Reimbursement systems that promote comprehensive care being cautious of their potential adverse effects

- Care pathway for specific presentation

- Don’t waste screening for frailty but do it earlier
  - Information systems, e.g. inter-RAI instruments

- A geriatric culture of care
  - Addressing implicit bias/stereotyping in the hospital and society
  - Staffing ED with older patients-friendly carers

- Important role of the academic center in education & research
Personal considerations and thoughts

- Discussion of the ED care for older people since the late 90’s: no progress

- The necessary in-depth understanding of the field: qualitative research

- To cure is not enough for quality of care: ordinary/institutional neglect is not the “prerogative” of the ED
Conclusions & perspectives

- Changes are beyond the only emergency settings and clinical features
  - Early identification of frail patients and care planning in view of their needs and preferences
  - Adaptation of the acute care to this population, at greater risk of admission than others.

- ED is currently an important event on the care path of an elderly person

- ED is a privileged place to initiate tailored care for the frailest: the geriatric flow
  - Triage: to test red-flags rather than scores
  - Collaboration: to investigate
  - More patient-centered (+relatives) and soft outcomes